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# High school pupils' attitudes to agricultural policies in Norway

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# 1. Introduction

In many developed countries, government intervention and regulation towards the agricultural sector is often justified by the public goods the sector is supposed to produce in addition to food and fiber (OECD 2001). During the last decades, Norwegian agricultural policy has mainly been justified by the importance of Norwegian agriculture for food safety, food security, rural viability, cultural landscapes, the environment, cultural heritage. Farmers' welfare has also played an important, although diminishing, role in Norwegian agricultural policy. In a white paper to the Norwegian Parliament in 1999 (Ministry of Agriculture, 1999), the concept of multifunctional agriculture was introduced i.e. the existence of positive links between the production of food and the production of public goods was emphasised. 'Active farming' in the meaning of food production was regarded as crucial for the production of such goods (Daugstad et al., 2006). The importance of agriculture for the cultural landscape was particularly emphasised by policy makers (Rønningen et al., 2004). In the latest white paper on this subject (Ministry of Agriculture and Food, 2011), increased emphasis is placed on the importance of producing abundant, safe, and diverse foods. The production of public goods like cultural landscapes remains important, but the multifunctionality of farming is clearly less emphasised.

Somewhat surprisingly, there is little scientific-based knowledge about exactly what kind of public goods the society demand from its agricultural sector, and even less is known about people's attitudes to those goods (Mittenzwei et al. 2010). Knowledge about attitudes to agriculture and agricultural policy should be considered an important input to policy-makers. In particular, such knowledge may serve as important information for the legitimacy and targeting of agricultural policies at home, as well as for the justification of the type and size of agricultural policy instruments in international fora such as the World Trade Organization (WTO) and the Organization for Economic Co-operation and Development (OECD).

While the study of policy attitudes seems a well-established area of research in general, there are few examples in the applied literature that explicitly attempt to explore people's attitudes to agriculture and agricultural policies. Variyam et al. (1990) study US citizens' attitudes to agricultural policies using just a few questions of a broad national survey. Arovuori and Kola (2005) interviewed Finnish experts about agriculture's multifunctionality and agricultural policy related issues. They focused on the preferences regarding the different aspects behind the concept of multi-functionality and the policies that were expected to promote these aspects. A conjoint study to elicit preferences for agricultural policy has been conducted in Switzerland (Forschungsstelle für Business Metric 2007). Gómez-Limón and Atance (2004) have studied social preferences for alternative agri-cultural policy programs in a Spanish region. In a study on climate change, Shwom et al. (2010) not only asked respondents about their attitudes to various climate change policies, but also about the rationales behind their attitudes. McCann-Hiltz (2004) re-reported the results of a survey on preferences for policy options regarding agricultural biotechnology. None of the analyses mentioned above has made an explicit effort to approach people's attitudes to agricultural policies.

Humans are expected to take on different roles in the public and the market sphere, namely as a citizen (agency for the public interest) in the public sphere and as a consumer (maximization of individual utility) in the market sphere as the institutional setting influences which preferences and values in the continuum from 'I' to 'We' are found to be acceptable and/or relevant (Sagoff, 1988; Vatn, 2005). Brennan and Lomasky's (1983) argue that all of us have different preference orders like market preferences and political preferences that may well be inconsistent with one another. Hyytiä and Kola (2006) found for example that citizens' attitudes toward multifunctional agriculture and consumers' willingness to pay for multifunctional agriculture are not positively related. Hence, when studying attitudes to agricultural policy it becomes important to create a citizen setting. The purpose of this paper is therefore to examine citizens' attitudes to agricultural policies. More specifically, we will examine the variation between different regions (urban versus rural) and we will analyse the effect of adding communicative rationality to a citizen setting. Communicative rationality implies communication with the intention of reaching agreement exclusively via the force of better arguments (Habermas, 1984). The communications should be free from manipulation and coercion, and the participants should act on 'higher' motives than their own interests. Analysing these issues can provide information that is important for policymakers to consider when formulating agricultural policies.

In this study, possible regional differences within the population with regard to attitudes towards agriculture and agricultural policies will be explored. The two regions that will be compared are Bergen, which is the second largest city in Norway and Northern-Østerdalen, which is a highly rural dominated area. This will be done by comparing the attitudes of pupils from a high school in the two regions.

## **2. Study sites**

### **Bergen**

The high school is situated approximately 16 kilometers outside of Bergen city center, still within the boarder of Bergen municipality. The area is characterized by new development of residential areas and industry, mainly services. There are agricultural landscapes close to the school and close to the residential areas. In comparison to most agricultural land on the Bergen peninsular and in Hordaland County, the district used to be of good farmland. These conditions are in contrast to the predominant climate at the west coast of Norway, which is relatively cold, rainy and with a rough topography. The farmers in Fana (the name of the area) used to prosper from the proximity to the urban area of Bergen to sell their products, and from a relatively mild climate, hilly topography, as opposed to mountainous, and less precipitation compared to the inland.

During the last 20-30 years, agricultural land has been converted into non-agricultural uses such as housing and infrastructure. There are still operative farms in the area although many farms have seized their agricultural operations. The shrinking number of active farms is thought to be due to a general development of new industries, the growing city of Bergen and the transformation from a primary industry society to a tertiary industry society in the

twentieth century. While farm income, and farm size, has stabilized, new opportunities within the service sector, manufacturing, construction and other industries have resulted in higher income for workers and companies. People have found work in secondary and tertiary industries. Demand for land to commerce, manufacturing and to residential areas increases caused by a growing population. This results in pressure on agricultural land. The decision to convert agricultural land into non-agricultural uses is taken by the local government. The proximity to Bergen airport increases the pressure on agricultural land.

### **3. Northern-Østerdal**

Nord-Østerdal high school is located in a highly rural mountain area in the northern – eastern part of south Norway. The school is situated in Tynset and the pupils do mainly come from six municipalities (Tolga, Os, Tynset, Alvdal, Rendalen, Folldal). The population density is quite low in these municipalities – ranging from 2,61 inhabitants per km<sup>2</sup> in Tynset to 0,47 inhabitants per km<sup>2</sup> in Rendalen. Agriculture is important for the employment in the region and the share of employment in agriculture ranges from 19 - 10 per cent (Lien et al., 2012). The dominant agricultural activities are dairy, beef and sheep farming. Infield and outfield grazing is important and mountain dairy farming is important in several of the municipalities. Other main sources of employment in the region are health and social services, industry, merchandising and construction.

### **4. Methodology**

Citizen attitudes to agricultural policy in Bergen and Northern-Østerdal were studied by visiting one high school in Bergen and Northern-Østerdal high school. We started the session by handing out a survey. This was finished individually. In the survey we approached the pupils primarily in their role as citizens rather than as consumers (Sagoff 1998, Vatn 2009). By doing so, we acknowledge that individuals may have different preferences when acting as citizens compared to when acting as consumers. We chose two approaches to map their individual attitudes. In the first approach, respondents were asked to mark on a Likert scale from 1 to 6 to which extent they agreed with a given agricultural policy issue. The questionnaire contained twenty-one such issues (Table 1) that were chosen based on political documents and statements that frequently appear in print and other media.

*Table 1. Agricultural policy issues in the questionnaire*

In my opinion society should give more priority to...
1) ... ensure that income from farming is in line with the income of other groups in society
2) ... ensure safe food
3) ... maintain food self-sufficiency at current levels
4) ... contribute to a healthy food diet
5) ... maintain an open cultural landscape
6) ... protect agricultural area from being diverted
7) ... ensure that animals are grazing outside
8) ... ensure stricter requirements on animal welfare
9) ... implement stricter environmental requirements
10) ... maintain rural settlement
11) ... preserve cultural heritage (e.g., old farm buildings, traditional food)
12) ...stimulate alternative income possibilities
13) ... stimulate to use of GMO (genmodified organisms) in agriculture
14) ... maintain as many farms as possible
15) ... reduce food prices to the same level as in Sweden
16) ... require better food labeling
17) ... reduce greenhouse gas emissions from agriculture
18) ... remove the duty to live on the farm
19) ... reduce budget support to agriculture
20) ... ensure a viable predator tribe
21) ... remove import tariff on cheese

In the second individual approach, respondents were asked to allocate 100 points to the following seven general agricultural policies issues: (1) food self-sufficiency, (2) food prices, (3) diversity of food choices, (4) rural settlement, (5) farm income, (6) protection of agricultural land, and (7) preservation of agricultural landscape. The questionnaire did not specify whether to increase, decrease or maintain the current level associated with the specific issues. Rather we were interested to know which issues agricultural policy-makers should address in general.

To add communicative rationality to the setting, we arranged face to face focus groups after the survey. We had a brief introduction and the students were grouped and given four questions to discuss within the group:

- What should be the role of agriculture in the society?
- What are the functions of agriculture worth subsidizing?
- How do we wish agriculture to look like in the future? Do we have any concerns regarding this? “Should” we have any concerns regarding this?
- What do you think should be important regarding the agricultural policy of Norway?

The groups made some notes for each of the questions before the questions were discussed in plenary. Everybody could comment on each other’s answers/comments. The research team

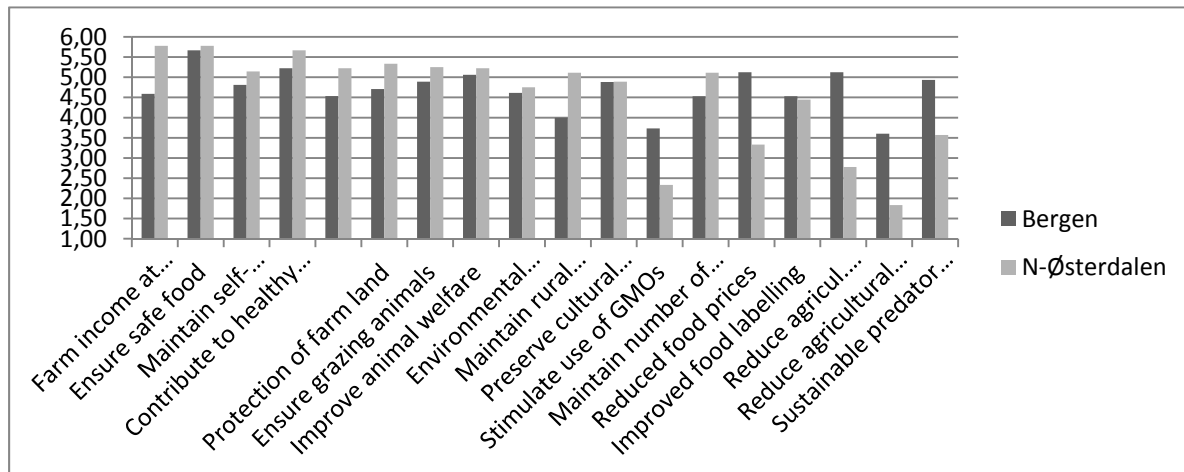
followed and took notes during the discussion. At Nord-Østerdal high school the respondents repeated the questionnaire at the end of the session.

## 5. Results

This section presents the results from the individual survey and the group/plenary discussion.

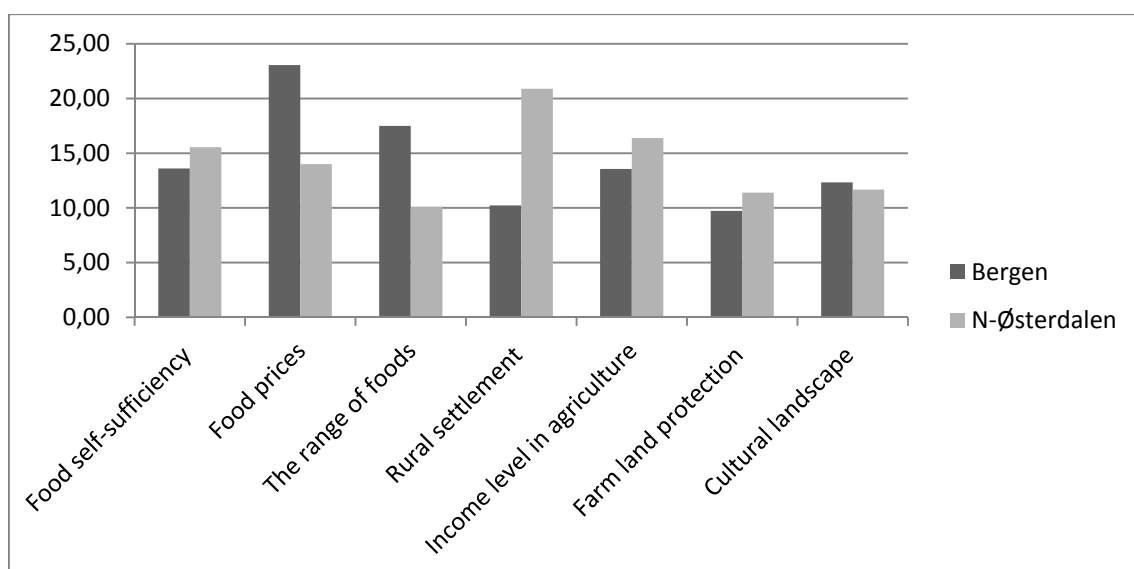
### Survey – individual citizen setting

Figure 1 presents the results of part 1 of the survey. Some of the statements that are included in Table 1 are removed due to low response rates. Pupils from both high schools give high priority to safe food and healthy diet. They agree that animal welfare, grazing animals, self-sufficiency, cultural heritage, environmental regulations, and food labelling should be important in the agricultural policy. We do, however, observe that while the pupils from Bergen strongly agree that green-house gas emissions from agriculture should be reduced, the pupils from Northern-Østerdalen disagree that this goal should be prioritized. We further observe that while the pupils from Bergen agree that food prizes should be reduced and that sustainable predator tribes should be prioritized, the pupils from Northern-Østerdalen appear neutral on these issues. It is further the case that the pupils from Bergen appear neutral on whether the use of GMOs should be stimulated and whether agricultural subsidies should be reduced, while the pupils from Northern-Østerdalen disagree that these goals should be prioritized. Although pupils from both high schools agree on the following issues, there is a tendency that ensuring farm incomes, maintaining rural settlement and cultural landscapes, protection of farm land and maintaining the number of farms are somewhat more important for the pupils from Northern- Østerdalen than those from Bergen. Hence, we observe that although the pupils from both schools find several public goods and bads from farming important to prioritize, there seems to be a tendency that the students from Bergen agree that food prices should be reduced, while the students from Northern-Østerdalen are neutral on this issue and the pupils from the Northern-Østerdalen disagree that agricultural subsidies should be reduced while the Bergen-pupils appear neutral on this issue.



*Figure 1. Policy goals the high school pupils in Bergen (N=18) and Northern-Østerdalen (N=9) emphasise that should be given more priority to in agricultural policy. Mean response to Likert sale survey (1=strongly disagree, 6=strongly agree)*

For the second part of the survey, where the pupils were forced to prioritize between seven agricultural policy goals, we observe (see Figure 2) that the differences between the two regions are somewhat greater than what we observed in Figure 1. The pupils from Northern Østerdalen give higher priority to rural settlement while the pupils from Bergen give higher priority to food prices and a wide range of food. For food self-sufficiency, income level in agriculture, farm land protection and cultural landscapes the respondents have responded quite similarly.



*Figure 2. Mean responses for Bergen (N=18) and N-Østerdalen (N=9) concerning priority to agricultural policy goals. Respondents were forced to distribute 100 points among 7 goals*

## Group and plenary discussion

In Bergen it was a good discussion among the students and different views were discussed. At Nord-Østerdal high school there was little disagreement among the pupils and therefore less discussion took place.

*Table 2. Results from group discussion on four questions concerning agricultural policy among high school pupils in Bergen and Nord-Østerdalen*

Question	High school in Bergen	High school in Nord-Østerdal
What should be the role of agriculture in the society?	<ul style="list-style-type: none"> <li>– Important to uphold Norwegian farming in case of an emergency situation, e.g. war.</li> <li>– Norwegian agriculture should produce a little bit more, at least not reduce, so that it can feed the Norwegian population.</li> <li>– Produce food and dairy products</li> <li>– Produce self-produced products</li> <li>– Food production</li> <li>– feed the population</li> <li>– Supply fresh food</li> <li>– Job provider to the ones seeking agricultural work</li> <li>– rural employment</li> <li>– maintain/preserve cultural landscapes</li> <li>– place to visit for cultural experiences</li> </ul>	<ul style="list-style-type: none"> <li>– Take care of farmland</li> <li>– Safe food production (food safety)</li> <li>– Food production</li> <li>– To produce large amounts of food so we do not need to import</li> <li>– Norwegian cultural heritage</li> <li>– The role of the agricultural sector should be central to society</li> <li>– Cheaper healthy food</li> <li>– Better labelling</li> <li>– Animal welfare</li> </ul>
What are the functions of agriculture worth subsidizing?	<ul style="list-style-type: none"> <li>– Support farms that need economic support to be operative.</li> <li>– We should subsidize the production of butter<sup>1</sup></li> <li>– Own produced food commodities so that they can be competitive towards foreign commodities.</li> <li>– Food and dairy products,</li> <li>– subsidize kinder gardens and schools so that children may visit farms with animals, so that they can learn. That would also be a good income for farmers.</li> <li>– Subsidize organic products.</li> <li>– To ensure enough money so that production can take place</li> <li>– money to survive, enough</li> </ul>	<ul style="list-style-type: none"> <li>– Food production</li> <li>– Milk and meat production</li> <li>– Cultural heritage</li> <li>– Acreage payments</li> <li>– Environment</li> <li>– The income of farmers</li> <li>– rural settlement/employment</li> <li>– The state must subsidize even small farms to promote the use of technology such as milking robots such that production becomes more efficient and farmers could have time for part time jobs</li> </ul>

<sup>1</sup> In 2011 Norway experienced “the butter crisis” – a period of empty butter shelves in shops.



	<p>money to be competitive on the Norwegian market,</p> <ul style="list-style-type: none"> <li>– maintaining employment in the industry</li> <li>– Subsidizes should be given to open more farms so that more people could be occupied in farming.</li> </ul>	
<p>How do we wish argiculture to look like in the future? Do we have any concerns regarding this? “Should” we have any concerns regarding this?</p>	<ul style="list-style-type: none"> <li>– We should be able to produce enough goods for ourselves and not be dependent of other countries.</li> <li>– Agriculture should be able to feed the whole country</li> <li>– More production</li> <li>– More employment</li> <li>– More organic food and locally produced food.</li> <li>– Remove the import duty on foreign goods. Rely more on imported food than subsidizing own products.</li> <li>– Rise animal welfare.</li> <li>– Sustainable food production, do not destroy the earth with pesticides and chemicals.</li> </ul>	<ul style="list-style-type: none"> <li>– More sustainable</li> <li>– Improved profitability so more could be engaged in farming</li> <li>– Not less farms</li> <li>– Higher wages for farmers</li> <li>– Agriculture is an important part of Norwegian history and has contributed to build our heritage. Hence, agriculture should be preserved and promoted.</li> </ul>
<p>What do you think should be important regarding the agricultural policy of Norway?</p>	<ul style="list-style-type: none"> <li>– Animal welfare</li> <li>– Have farmers, slaughtering house, and food production in every county.</li> <li>– Environmental friendly and enough subsidies to the farmers.</li> <li>– Cheap food more machineries</li> <li>– More import of foreign food.</li> <li>– Farm support to keep in competition with international markets.</li> <li>– Focus on own produced – local food.</li> <li>– Larger production.</li> <li>– Farmers should have more economical advantages so that not so many would move to the cities.</li> <li>– Take care of the cultural landscape.</li> <li>– Keep people from moving from rural areas</li> <li>– maintain agricultural land.</li> </ul>	<ul style="list-style-type: none"> <li>– Higher income</li> <li>– Animal welfare / strict animal welfare requirements / improving the welfare of chickens</li> <li>– Food safety</li> <li>– Working environment</li> <li>– Good example for other countries</li> <li>– Norwegian agricultural products should be prioritized over imported goods</li> <li>– The farmers should get as much paid for the work they do as everyone else</li> </ul>

Table 2 presents the results from the group discussion. We observe that, despite of variation concerning location, many of the same concerns are present among the pupils from the two high schools. Pupils from both high schools are concerned about food production. The Bergen group emphasise that an important role for Norwegian agriculture is to produce food for the Norwegian population. The pupils do however vary concerning whether Norwegian food production should increase or be replaced by increased food import. Some of the pupils from Bergen and Nord-Østerdalen emphasise that we should be able to produce enough goods for ourselves and not be dependent on other countries, while other Bergen-pupils emphasise that we should rely more on imported food than subsidizing own food products. Bergen-pupils do further emphasise that Norwegian agriculture should supply fresh food, more organic food and more locally produced food. Nord-Østerdalen pupils emphasise that food safety, cheaper healthy food and improved labelling should be important. Pupils from both high schools emphasise that Norwegian food production should be subsidized and some of the Bergen-pupils emphasise that organic products should be subsidised.

Concerning public goods from farming, we observe that pupils from Bergen emphasise that it is important to uphold Norwegian farming in case of an emergency situation like war and that it is important to maintain and preserve cultural landscapes. Pupils from both high schools emphasise that cultural heritage, environmental sustainability, animal welfare and protection of farmland should be important. The pupils from Nord-Østerdalen emphasise that cultural heritage, environmental aspects of farming and agricultural land (acreage payments) should be subsidized.

Pupils from both high schools highlight that agriculture is and should be important for rural viability and rural employment and that subsidies should be provided to maintain or increase the number of farmers.

## **6. Conclusion and discussion**

In this paper pupils from two high schools located in two different parts of Norway were asked to express their attitudes to agricultural policy in two different settings. In the first setting, the respondents should express their individual citizen attitudes to agricultural policy by responding to an individual survey. In the second setting, an important element of a citizen setting, namely deliberation on what agricultural policy goals that there is most reason to prefer, were added.

In the individual citizen setting, we experienced that the respondents from both high schools give high priority to the production of several public goods from agriculture like safe food and animal welfare. The pupils from Bergen do also prioritize reduced food prizes and a wide range of foods. The pupils from Northern-Østerdalen disagree that agricultural subsidies should be reduced and they give high priority to rural settlement and farm income. In the deliberative citizen setting we observe the same trends in terms that several public goods (animal welfare, sustainable food production, cultural heritage, cultural landscapes) are important for the respondents from both schools and that some of the pupils from Bergen emphasise that cheap food and more import of foreign food should be important. We do,

however, observe that the differences between the two high schools seem smaller than for the individual survey. Farm income and rural settlement are for example emphasised by pupils from both high schools. We further observe that some new elements are introduced in the deliberative setting. Norwegian food production, local food, organic food and fresh food are valued by the pupils.

Hence, in this paper we have observed that high school pupils from an urban and a rural part of Norway, to some extent, prioritize differently regarding what should be prioritized in the agricultural policy. These differences are, however, reduced when we move from an individual citizen setting to a deliberative citizen setting. If similar studies should be conducted in the future, an important lesson from this study is that it is important to include participants with different viewpoints to foster communicative rationality. The pupils from the urban region represented greater diversity regarding viewpoints on agricultural policy and more deliberation was therefore taking place here.

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